GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: <u>33253.1.1</u>	ID: B-3714	COUNTY: Wilkes						
F.A. Number:	BRSTP-268(7)							
DESCRIPTION(1):	Bridge No. 83 over Mulberry Creek on NC 268							
INFORMATION ON E	XISTING BRIDGES Information obtained from: X X	field inspection microfilm(Reel:Pos:) other Bridge Survey and Hydraulic Design Report						
COUNTY BRIDGE NO.	83 BRIDGE LENGTH 128' NO. BENTS IN: CHANNEL	2 FLOOD PLAIN 2						
FOUNDATION TYPE:	Concrete deck supported by concrete girders with concrete abutments; reinforced post and web interior bents with pile supported footings at the interior bents.							
EVIDENCE OF SCOUR(2):								
ABUTMENTS OR END	BENT SLOPES: None noted.							
INTERIOR BENTS: CHANNEL BED: CHANNEL BANKS: The channel banks are being undermined by the stream, and tree roots have been exposed along the bank. EXISTING SCOUR PROTECTION: TYPE(3): Rip rap on end bent slopes EXTENT(4): Face of end bent embankments EFFECTIVENESS(5): OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): DESIGN INFORMATION CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Coarse to fine sand (A-3) upstream of existing								
bridge; cobbles and boulders downstream of existing bridge								
CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Clayey, fine sandy SILT (A-4), and variably silty,								
coarse to fine SAND (A-2-4 and A-3)								
CHANNEL BANK COVER(9): I Hardwood, brush, and grass/weeds								
FLOOD PLAIN WIDTH(10): Greater than 1,000 feet								
FLOOD PLAIN COVER(11): Hardwood, brush, and grass/weeds								

					SHEET 29 OF 40
DESIGN INFORMATION C	<u>ONT.</u>				PAGE 2
STREAM ISXDEGI	RADING	AGGRAI	DING (12)		
OTHER OBSERVATIONS A	AND COMMEN	ITS:			
CHANNEL MIGRATION TE	NDENCY (13)	: Migration	n potential aj	ppears to be towards E	nd Bent-2.
REPORTED BY: Trigo GEOTECHNICALLY ADJUST				DATE:	12/23/2004
		100 year	500 year		
	TB1-A	976.7'	975.0'		
	TB1-B	976.4'	974.6'		
	TS2-A	978.7'	978.7'		
	TS2-B	974.4'	973.6'		
REPORTED BY:		GEOTECHNICA RUCTIONS	AL UNIT	DATE:	1-10-05
 (1) GIVE THE DESCRIPTION OF (2) NOTE ANY EVIDENCE OF S SLOUGHING, SCOUR LOCA (3) NOTE ANY EXISTING SCOU (4) DESCRIBE THE EXTENT OF (5) DESCRIBE WHETHER OR 	COUR AT THE EXI ATIONS, DEGRADA R PROTECTION (F FANY EXISTING SO	STING END BEN' ITIONS, ETC.) RIP RAP, ETC.) COUR PROTECTI	TS OR ABUTM ION.	IENTS (UNDERMINING,	SSED.

- NOTE ANY DAMS, FALLEN TREES, DEBRIS AT BENTS, ETC.
- DESCRIBE THE CHANNEL BED MATERIAL: A SAMPLE SHOULD BE TAKEN FOR GRAIN SIZE DISTRIBUTION, ATTACH LAB RESULTS.
- DESCRIBE THE CHANNEL BANK MATERIAL: A SAMPLE SHOULD BE TAKEN FOR GRAIN SIZE DISTRIBUTION, ATTACH LAB RESULTS.
- (9) DESCRIBE THE BANK COVERING (GRASS, TREES, RIP RAP, NONE, ETC.
- (10) GIVE THE APPROXIMATE FLOOD PLAIN WIDTH (ESTIMATE).
- (11) DESCRIBE THE FLOOD PLAIN COVERING (GRASS, TREES, CROPS, ETC.)
- (12) CHECK THE APPROPRIATE SPACE AS TO WHETHER THE STREAM IS DEGRADING OR AGGRADING
- (13) DESCRIBE THE POTENTIAL OF THE BODY OF WATER TO MIGRATE LATERALLY DURING THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS).
- (14) GIVE THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION EXPECTED OVER THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS). THIS CAN BE GIVEN AS AN ELEVATION RANGE ACROSS THE SITE, OR ON A BENT BY BENT BASIS WHERE VARIATIONS EXIST. DISCUSS RELATIONSHIP BETWEEN THE HYDRAULICS THEORETICAL SCOUR AND THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION. THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION IS BASED ON THE ERODABILITY OF MATERIALS WITH CONSIDERATION FOR JOINTING, FOLIATION, BEDDING ORIENTATION AND FREQUENCY; CORE RECOVERY PERCENTAGE; PERCENTAGE RQD; DIFFERENTIAL WEATHERING, SHEAR STRENGTH; OBSERVATIONS AT EXISTING STRUCTURES; OTHER TESTS DEEMED APPROPRIATE; AND OVERALL GEOLOGIC CONDITIONS AT THE SITE.